

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference PHNL030755WO	FOR FURTHER ACTION		See item 4 below
International application No. PCT/IB2004/050929	International filing date (day/month/year) 17 June 2004 (17.06.2004)	Priority date (day/month/year) 23 June 2003 (23.06.2003)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant KONINKLIJKE PHILIPS ELECTRONICS N.V.			

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).

2. This REPORT consists of a total of 8 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

Date of issuance of this report 03 January 2006 (03.01.2006)	
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From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)Applicant's or agent's file reference
see form PCT/ISA/220FOR FURTHER ACTION
See paragraph 2 belowInternational application No.
PCT/IB2004/050929International filing date (day/month/year)
17.06.2004Priority date (day/month/year)
23.06.2003International Patent Classification (IPC) or both national classification and IPC
G11B20/18Applicant
KONINKLIJKE PHILIPS ELECTRONICS N.V.

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. **type of material:**
 - a sequence listing
 - table(s) related to the sequence listing
 - b. **format of material:**
 - in written format
 - in computer readable form
 - c. **time of filing/furnishing:**
 - contained in the international application as filed.
 - filed together with the international application in computer readable form.
 - furnished subsequently to this Authority for the purposes of search.
3. In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or
industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-13
Inventive step (IS)	Yes: Claims	
	No: Claims	1-13
Industrial applicability (IA)	Yes: Claims	1-13
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V.

- 1 The following documents are referred to in this communication:
D1 : WO 95/24038 A (CIRRUS LOGIC INC) 8 September 1995 (1995-09-08)
2. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 to 13 is not new in the sense of Article 33(2) PCT.

2.1. Document **D1 discloses (the references in parenthesis applying to this document):**

a device for recording information ("disk drive system", on page 4, lines 9-10), in blocks having logical addresses ("logical sector number", on page 9, line 7) on a record carrier (for example figure 1), which device comprises

- recording means for recording marks in a track on the record carrier representing the information (page 4, lines 9-10, in conjunction with figure 1)
- control means ("system", on page 9, lines 4-8) for controlling the recording by locating each block ("target", on page 9, lines 4-8) at a physical address in the track, the control means comprising
- addressing means for translating the logical addresses into the physical addresses and vice versa in dependence of defect management information (page 9, lines 6-8),
- defect management means ("Sector slipping" on page 8, lines 3-23) for detecting defects and maintaining the defect management information in defect management areas on the record carrier (page 5, line 5, to page 6, line 5), the defect management information at least including remapping information indicative for translating a logical address initially mapped to a physical address exhibiting a defect to an alternate physical address in a defect management area ("Sector slipping" on page 8, lines 3-23; figures 3a-3e, 4, 5a, 5b),
- contiguous recording detection means for detecting a series of blocks having a continuous logical address range to be recorded in a corresponding allocated physical address range (page 7, lines 16, 17: "to read or write the data in a consecutive order corresponding to the logical sector numbers"),
- offset means for generating local offset information for, in the event of a defect interrupting the allocated physical address range, adding an offset to a local range of physical addresses in said address translation for skipping the defect and writing the blocks logically following the last block before the defect at physical addresses following the defect (page 9, lines 4-8), and
- end portion ("spares", page 9, lines 13-19; figures 3b, 3c) recording means for

accommodating recording an end portion of at least one block of the continuous logical address range, which end portion extends beyond the allocated physical address range due to the defect.

So claim 1 is not new.

2.2. In **D1**, the end portion recording means are for recording the end portion in a defect management area, in particular in a single defect management area (page 9, lines 13-19, in conjunction with page 6, line 9, to page 7, line 32, and figures 3a-3e).

So dependent claim 2 is not new.

2.3. In **D1**, the end portion recording means are for remapping a number of blocks following the allocated physical address range, the number corresponding to the number of blocks in the end portion, and for recording the end portion starting at the physical address following the allocated physical address range ("spares", page 9, lines 13-19; figures 3b, 3c).

So dependent claim 3 is not new.

2.4. In **D1**, the end portion recording means are for retrieving all previously recorded blocks in a physical address range from the physical address following the allocated physical address range up to a defect management area, for recording the end portion starting at the physical address following the allocated physical address range, and for recording said retrieved previously recorded blocks starting at the physical address following the recorded end portion (figures 3d-3e, 4, 5a, 5b; page 6, line 9, to page 10, line 8).

So dependent claim 4 is not new.

2.5. In **D1**, the offset means are for generating at least one offset entry, the offset entry indicating a logical "from" address and an offset to be added to a physical address for logical address equal to or above the logical "from" address, in particular up to a next logical "from" address in a next offset entry (figures 3d-3e, 4, 5a, 5b; page 12, line 27, to page 13, line 18; page 15, line 25, to page 16, line 17).

So dependent claim 5 is not new.

2.6. In **D1**, the offset means are for generating an entry in the remapping information for a logical address that has been reassigned to a different physical address by the end portion recording means (figures 3d-3e, 4, 5a, 5b; page 12, line 27, to page 13, line 18;

page 15, line 25, to page 16, line 17).

So dependent claim 6 is not new.

2.7. In **D1**, the end portion recording means are for detecting a free location on the record carrier, for recording the end portion in the free location, and for remapping original logical addresses assigned to the free location, in particular remapping an original logical address to the physical address of the defect interrupting the allocated physical address range (figures 3d-3e, 4, 5a, 5b; page 12, line 27, to page 13, line 18; page 15, line 25, to page 16, line 17).

So dependent claim 7 is not new.

2.8. In **D1** the end portion recording means are for detecting a free location on the record carrier, for recording the end portion in the free location, and for updating **file system information** indicating the logical addresses of the series of blocks as part of a file (figures 3d-3e, 4, 5a, 5b; page 12, line 27, to page 13, line 18; page 15, line 25, to page 16, line 17). Indeed **D1** relates to the control of storage systems for digital computers so the control device has inherently file system information.

So dependent claim 8 is not new.

2.9. in **D1**, the end portion recording means are for detecting a free location on the record carrier, for retrieving previously recorded blocks in a physical address range following the allocated physical address range, for recording the end portion in the physical address range following the allocated physical address range, for recording said retrieved previously recorded blocks in the free location, and for updating file system information indicating the logical addresses of said retrieved previously recorded blocks as part of a file (figures 3d-3e, 4, 5a, 5b; page 12, line 27, to page 13, line 18; page 15, line 25, to page 16, line 17).

So dependent claim 9 is not new.

2.10. In **D1**, the contiguous recording detection means are for detecting a continuous recordings indicator in a recording command, and for detecting the series of blocks representing real-time information, in particular video information (page 7, lines 16, 17: "to read or write the data in a consecutive order corresponding to the logical sector numbers"). Indeed **D1** relates to the control of storage systems for digital computers so it relates to storage systems for storing for example real-time information such as video information.

So dependent claim 10 is not new.

2.11. Point 2.1. above applies mutatis mutandis to the device of independent claim 11 for reading information in blocks having logical addresses on a record carrier, which device comprises

- reading means for reading marks in a track on the record carrier representing the information,
- control means for controlling the reading by locating each block at a physical address in the track, the control means comprising
- addressing means for translating the physical addresses into the logical addresses and vice versa in dependence of defect management information, the defect management information at least including remapping information indicative for translating a logical address initially mapped to a physical address exhibiting a defect to an alternate physical address in a defect management area, and
- offset means for recovering local offset information for adding an offset to a local range of physical addresses in said address translation for skipping a defect.

So claim 11 is not new.

2.12. Point 2.1. above applies mutatis mutandis to independent method claim 12, which comprises all the technical features of apparatus claim 1 but in terms of method steps, and to claim 13 which defines a computer program product for recording of information, which program is operative to cause a processor to perform the method as claimed in claim 12.